

Work Order ID 153445

Monday, November 21, 2016 9:26:42 AM

153445*Habit*

Page 1

Item ID: D350-636-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 12/1/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

DAS
21
9-89

Date: NOV 21 2016

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2750-041

G

DEC 08 2016

DAS
6
9-89DAS
21
9-89

16-12-08

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

Memo

record fwd angle:

89.8°

0.00

Doc.Control -USB or Paperwork

Photocopy blue file and type labels per PPP D350-636-011 CHG 007

DAS
27
9-89

1 0 16-11-22

DEC 12 2016

DAS
19
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

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Page 2

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00

110

Skidtubes

0.16

Skidtubes

Memo

1- Pick D2600-3 Bent ✓

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side.

*****ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*****

Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side (detail B)

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE.

6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

7- Open up holes of Detail A to 0.297" (total of 2 holes per side)

8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

16-11-22
16-11-23

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A/R Aluminum Rod batch: M133750

9-Grind welds flush as per Dwg D2750

7BL16-11-23

120

120

QC

Quality Control

QC10- Inspt visual per QSI004- ground welds

0.00

Memo

0.00

1DAS
38
9-89

NOV 24 2016

130

130

QC

Quality Control

QC5- Inspt part completeness to step on W/O

0.00

Memo

0.00

1DAS
38
9-89

NOV 24 2016

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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Monday, November 21, 2016 9:26:43 AM

Page 4

~~1~~ ~~2~~ 16-11-24 DAS 19 9-00

16-11-24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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160

0.00

160

Skidtubes

Skidtubes

Memo

0.18

Skidtubes

1-Open up holes using hole saw of Detail C and ground handling to 0.625"
(total of 8 holes per side)
as per dwg D2750.

2-Open up holes using hole saw of Detail B to 0.750" (total of 4 holes per side)
as per dwg D2750.

3- Open float hole using un-bit to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750
(welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015, let cure for 12hrs.

A/R Sikaflex-291

batch: B 136093exp. date: 1702-16*****ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*****

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 8)

A/R Aluminum Rod batch: M 133760

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

16-11-24 [Signature]

16-11-27 [Signature]

7 BE 16-11-25

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								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____		

Work Order ID 153445***153445***

Page 6

Monday, November 21, 2016 9:26:43 AM

Item ID: D350-636-011 **Accept** ***N900040100*** **Setup Start *NS1***
Revision ID: **Stop *NS2***
Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.
Start Date: 11/21/2016 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 12/1/2016 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start *NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	10-Grind welds flush as per Dwg D2750								
	11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750								
	12-Deburr holes, ensure tube is free of all scratches before sending to paint.								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.00							
Quality Control	***VERIFY C'BOARD IS GOOD***								

16-11-28 JH

DAS 38 9-89 NOV 30 2016

DAS 38 9-89 NOV 30 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 153445

Monday, November 21, 2016 9:26:43 AM

153445

Page 7

Item ID: D350-636-011**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Item Name:** Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Stop *NS2*****Start Date:** 11/21/2016 **Start Qty:** 1.00 ***1*****Cust Item ID:****Required Date:** 12/1/2016 **Req'd Qty:** 1.00 ***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00							DAS 41 9-89
190									
HandFinish	Memo	0.07				1			16-12-3
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200		0.00							DAS 41 9-89
200									
SprayPaint	Memo	0.06				1			16-12-4
Spray Painting	1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: <u>135929</u>								
	2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: <u>136040</u>								
210	QC14- Inspect Spray Paint	0.00							
210									
QC	Memo	0.00							12x d del 12/12/16 DAS 15 9-89
Quality Control	Inspect for foreign object per QSI 024								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 153445

Monday, November 21, 2016 9:26:43 AM

153445

Page 8

Item ID: D350-636-011**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 12/1/2016 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
230	HandFinish								
Hand Finishing	Memo	0.22							
	1- Install inserts as per Dwg D2750								
	2-Inspect for Foreign Objects								
	3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750								
	SIKA FLEX 241								
	BATCH: <u>M1136093</u>								
	EXP DATE: <u>17109</u>								
	4- Assemble o'ring to plug as per dwg D3492 and apply o'ring lube								
	A/R 55-o'ring lube batch: <u>M1135473</u>								
	5- Coat all exposed fasteners with "LPS Procyon" batch: <u>M1133690</u>								
240	QC5- Inspect part completeness to step on W/O	0.00							
240	QC								
Quality Control	Memo	0.00							

16H d all 16/12/07

120598 M1135385 18100

DAS
DEC 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____		

Work Order ID 153445***153445***

Page 9

Monday, November 21, 2016 9:26:43 AM

Item ID: D350-636-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 12/1/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

DEC 08 2016

DAS
28
9-89
DAS
6
9-89

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.01

Quality Control

*****ensure antiseize is on AN8C21A bolts*****

DAS
27
9-89

DEC 12 2016

270

Packaging

0.00

270

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-011
Location : FG072

sold

DAS
28
9-89
DAS
27
9-89

DEC 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Work Order ID 153445

Monday, November 21, 2016 9:26:43 AM

153445

Page 10

Item ID: D350-636-011**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 12/1/2016 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.02

Quality Control

DAS
21
9-89

DEC 13 2016

H6-12-12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____					

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 1

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:I 02.09.25 Rearranged procedure steps KJ
IPP Rev:J 06-03-23 As per Rev D JLM
IPP Rev:K 06-07.13 As per dsi9343 EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC
IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
DD verf:EC IPP Rev:P 10.06.22 revise
seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
DD verf:EC IPP REV:R 13.08.27 PER ECN13-594 DD
VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-1 *D3492-1* Plug		Manufactured	No			230	Each	135.0000	8	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		135							
				148723		4							
				<u>150701</u>		131							
D3492-3 *D3492-3* Plug		Manufactured	No			230	Each	154.0000	8	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		154							
				142869		3							
				147535		26							
				<u>150361</u>		125							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval 		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 2

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0863J

Purchased

No

250

Each

426.0000

2

2

NAS1149D0863.J

Washer

**

DAS 28
6 9-89 686
9-89
DEC 08 2016

Location

Loc Qty

Loc Code

FP001

46

125484

46

ST260a

100

125635

100

ST263

280

125268

280

2

NAS1611-010

Purchased

No

230

Each

161.0000

8

8

NAS1611-010

O-RING

**

ll 16/12/03

Location

Loc Qty

Loc Code

FP001

161

m134955

7

m135603

154

x8

D2744

Manufactured

No

110

Each

22.0000

1

1

D2744

Cap

**

BE 16-11-23

Location

Loc Qty

Loc Code

LG001

22

145790

12

150653

10

1

D2600-3-BENT-LH

Manufactured

No

110

Each

12.0000

1

1

D2600-3-BENT-LH

Extrusion Bent LH

**

16-11-22 DT

Location

Loc Qty

Loc Code

LG002

12

149642

2

150601

10

1

Monday, November 21, 2016 9:26:47 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 3

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D2743

Manufactured No

160

Each

134.0000

8

8

D2743

Crossbolt Spacer

BE16-11-26

Location

Loc Qty

Loc Code

LG001

134

147561

8

150407

126

8

D2739

Manufactured No

160

Each

9.0000

1

1

D2739

350 I Beam

16-11-24 DT

Location

Loc Qty

Loc Code

LG002

9

150718

9

1

D3490-3

Manufactured No

160

Each

31.0000

4

4

D3490-3

Cross Bolt Spacer

BE16-11-25

Location

Loc Qty

Loc Code

LG001

31

137807

2

140801

1

150497

28

4

D3490-1

Manufactured No

160

Each

45.0000

4

4

D3490-1

Cross Bolt Spacer

BE16-11-25

Location

Loc Qty

Loc Code

LG001

45

134019

4

150496

41

4

Monday, November 21, 2016 9:26:47 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 4

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

AELS8-1032-225

Purchased

No

Each

5,207.000

38

ALS4-1032-225

Rivnut

**

ll 16/12/07

Location

Loc Qty

Loc Code

CCK007

5000

M135998

5000

FG

20

M134975

20

FP001

187

M135603

40

M135920

147

x38

D3793-3

Manufactured

No

230

Each

17.0000

1

1

D3793-3

Wearplate Aft

**

ll 16/12/07

Location

Loc Qty

Loc Code

FP002

17

148620

5

150138

12

AN8C35A

Purchased

No

230

Each

64.0000

1

1

AN8C35A

Bolt

**

ll 16/12/07

Location

Loc Qty

Loc Code

FG

5

121275

5

FP001

29

m133336

15

m134130

14

over005

30

m134131

15

m134133

15

x1

Monday, November 21, 2016 9:26:47 AM

Shop Packet Print

Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
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Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 5

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D3793-1

Manufactured No

230

Each

17.0000

1

1

D3793-1

Wearplate Fwd

**

all 11/21/07

Location

Loc Qty

Loc Code

FP002

17

148647

5

150194

12

xl

D3488-041

Manufactured No

230

Each

13.0000

1

1

D3488-041

Blade Fitting LH

**

all 11/21/07

Location

Loc Qty

Loc Code

FP001

13

141109

1

144742

2

148871

5

150613

5

xl

D3794-3

Manufactured No

230

Each

25.0000

1

1

D3794-3

Gasket Aft

**

all 11/21/07

Location

Loc Qty

Loc Code

FP001

25

147325

1

150181

13

150612

11

xl

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Picklist Print

Monday, November 21, 2016 9:26:47 AM

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

AN6C44A Purchased No 230 Each 376.0000 4 4

AN6C44A

Bolt

**

all 16/12/07

Location

Loc Qty

Loc Code

FP001

62

131649

50

m132556

12

over009

314

m132556

210

m135718

52

m135719

52

x4

MS21083C8 Purchased No 230 Each 81.0000 1 1

MS21083C8

Nut

**

all 16/12/07

Location

Loc Qty

Loc Code

FP001

14

m135603

14

M1136295

xl

ST297

67

m135297

25

m135470

2

m136047

40

D3536-25 Manufactured No 230 Each 19.0000 1 1

D3536-25

Gasket Center

**

all 16/12/07

Location

Loc Qty

Loc Code

FG

6

87053

2

95328

4

B153641

xl

FP001

13

146747

2

150578

11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	Past Due ☐							

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 7

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D3631-1 Manufactured No 230 Each 159.0000 8 8

D3631-1

Washer

**

ll 16/12/07

Location

Loc Qty

Loc Code

FP001

159

147068

7

148837

52

150675

100

x8

D3791-1 Manufactured No 230 Each 8.0000 1 1

D3791-1

Wearpad

**

ll 16/12/07

Location

Loc Qty

Loc Code

FP002

8

148677

8

13150660

x1

NAS1149C0332R Purchased No 230 Each 3,522.000 38 38

NAS1149C0332R

WASHER

**

ll 16/12/07

Location

Loc Qty

Loc Code

FP001

880

m135672

568

m135948

312

M1136199

x38

GA

86

m133284

86

ST260a

1500

m135466

1000

m136042

500

ST266

1056

m135408

356

m135766

500

m135908

200

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
						Completed By															
						Lead hand / Supervisor Approval Verification															
			QC / QA Coordinator Approval																		
Root Cause			FAULT CATEGORY																		
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 8

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D2745 Manufactured No 230 Each 38.0000 8 8

D2745

Bushing

lll 16/12/07

Location

Loc Qty

Loc Code

FP001

38

129584

7

136214

2

145904

29

B150681

x8

AN3C5A Purchased No 230 Each 1,248.000 34 34

AN3C5A

Bolt

lll 16/12/07

Location

Loc Qty

Loc Code

FG

5

122800

5

FP001

130

M135603

130

OVER002

900

M135948

400

M136047

500

ST350

213

M134676

13

M135442

200

M1136295

x34

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐ _____					

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 9

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

145.0000

3

3

D3537-1

Wearpad

ell 16/12/07

Location

Loc Qty

Loc Code

FG

14

79833

4

88562

10

FP001

130

141922

7

147593

36

150462

34

150709

1

151518

52

ST184

1

125911

1

NAS1149C0832R

Purchased

No

230

Each

125.0000

1

1

NAS1149C0832R

Washer

ell 16/12/07

Location

Loc Qty

Loc Code

FP001

23

m125807

23

ST265

102

m135536

102

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 10

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

177.0000

4

4

AN3C6A

Bolt

**

all 11/21/16

Location

Loc Qty

Loc Code

FG

10

122416

10

FP001

72

M136295

x3

m135704

72

x1

OVER002

60

m135442

60

ST349

35

m128704

27

m132767

2

m133077

6

NAS1611-013

Purchased

No

230

Each

227.0000

8

8

NAS1611-013

O-Ring

**

all 11/21/16

Location

Loc Qty

Loc Code

FP001

227

m134676

30

m135544

93

m135603

104

x8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____		

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 11

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

15.0000

1

1

D3535-25

Wearplate Center

**

all 16/12/07

Location

Loc Qty

Loc Code

FG

4

139987

1

148669

1

95077

2

FP002

11

148669

3

150650

8

B153991 *

x1

D3794-1

Manufactured No

230

Each

20.0000

1

1

D3794-1

Gasket Fwd

**

all 16/12/07

Location

Loc Qty

Loc Code

FP001

20

142770

1

147682

1

150417

6

150695

12

x1

MS21043-6

Purchased No

230

Each

87.0000

4

4

MS21043-6

NUT

**

all 16/12/07

Location

Loc Qty

Loc Code

FG

20

103693

20

FP001

57

m135470

30

m135603

2

m136047

25

ST302

10

m134817

10

M1136295

x3

x1

Monday, November 21, 2016 9:26:47 AM

Shop Packet Print

Page 11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
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Picklist Print

Page 12

Monday, November 21, 2016 9:26:47 AM

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

46.0000

2

2

D3493-1

Washer

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

FG

10

97201

10

ST039

36

140678

16

150677

20

2

***ONLY INSTALL IF INSTALLING ON APICAL
FLOAT SYSTEM***

MS21083C8

Purchased

No

250

Each

81.0000

2

2

MS21083C8

Nut

DAS 28
6 9-89
DEC 08 2016

DAS 27
9-89

Location

Loc Qty

Loc Code

FP001

14

m135603

14

ST297

67

m135297

25

m135470

2

m136047

40

2

AN8C21A

Purchased

No

250

Each

28.0000

2

2

AN8C21A

Bolt

m136262

DAS 28
6 9-89
DEC 08 2016

DAS 27
9-89

Location

Loc Qty

Loc Code

FG

4

123966

2

m132169

2

ST332

24

m132169

2

m132522

1

m134590

21

Monday, November 21, 2016 9:26:47 AM

Shop Packet Print

Page 12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	Past Due ☐							

Picklist Print

Monday, November 21, 2016 9:26:47 AM

Page 13

Work Order ID: 153445

153445

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/1/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

175.0000

4

4

***NAS1515H3I ***

Washer

**

all in a log

Location

Loc Qty

Loc Code

FG

40

102472

40

FP001

31

m127831

20

m134508

11

ST260a

100

m135600

100

ST266

4

m130726

4

D2741

Manufactured

No

250

Each

60.0000

1

1

D2741

Replacement Blade

**

DAS
6 28
9-89

DEC 08 2016

Location

Loc Qty

Loc Code

FG

10

131616

10

ST538

50

132981

15

148028

35

D3532-1

Manufactured

No

250

Each

35.0000

2

2

D3532-1

Spacer

**

DAS
6 28
9-89

DEC 08 2016

Location

Loc Qty

Loc Code

ST041

35

144630

5

150708

30

Monday, November 21, 2016 9:26:48 AM

Shop Packet Print

Page 13

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐ _____					

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 153445 MLO
/6-11-21

RELEASED
2013-08-13
WD

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1/-4/-5/-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PART13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C818; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 91339157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S283 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
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D2750

TITLE

350 SKIDTUBE ASSEMBLY

REV. G

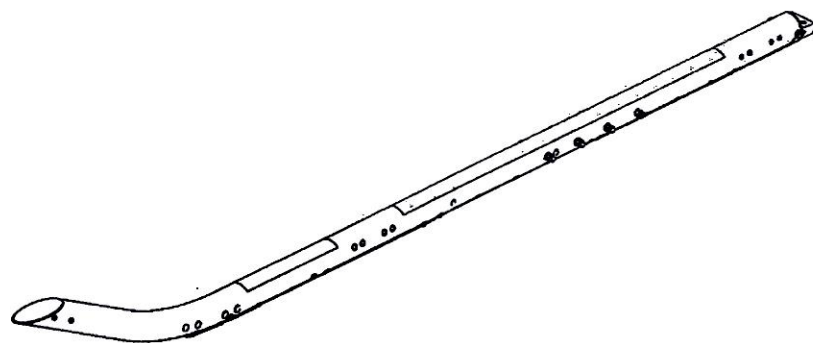
SHEET 1 OF 11

SCALE

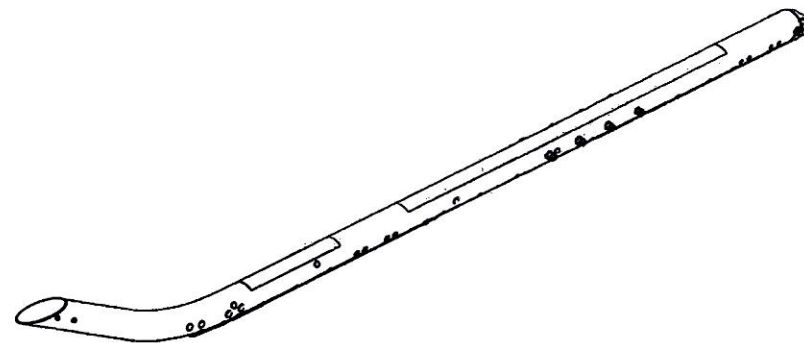
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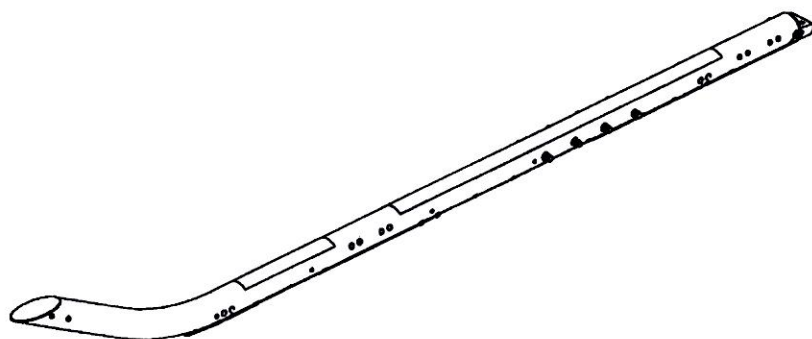
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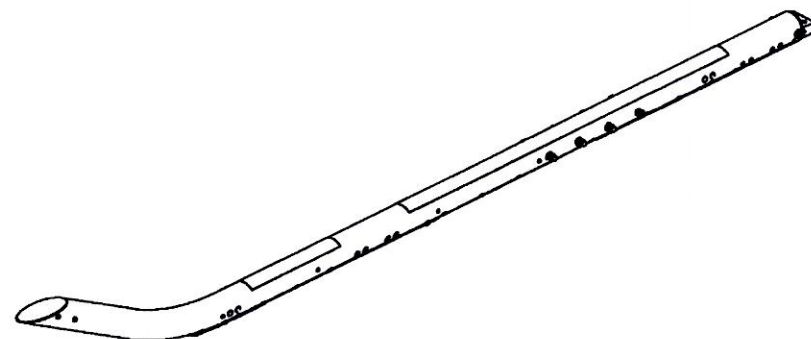
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D2750-043 350 SKIDTUBE ASSEMBLY, LH

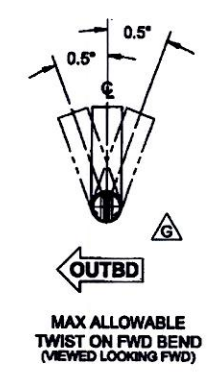
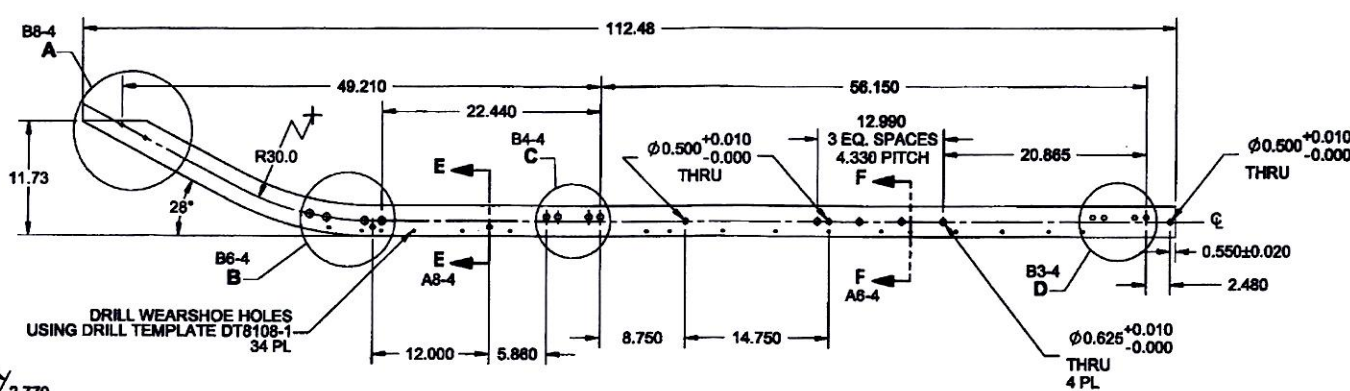


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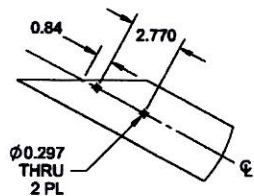
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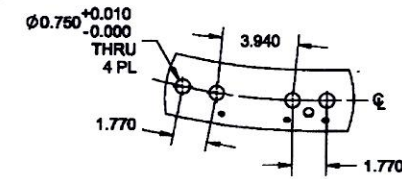
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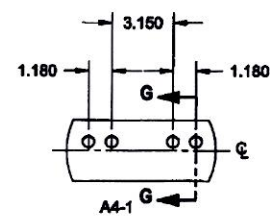
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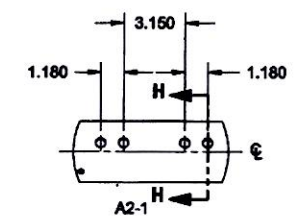
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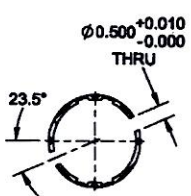
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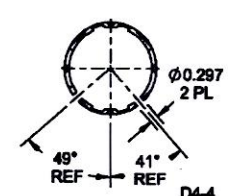
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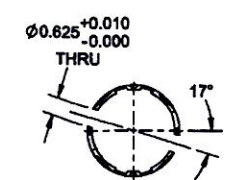
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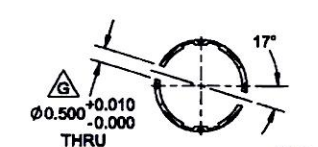
SECTION E-E
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SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



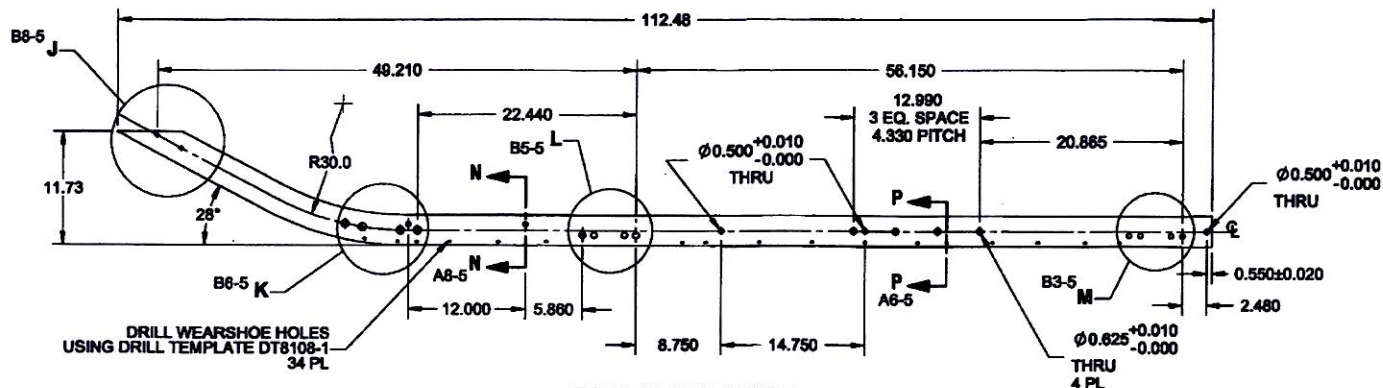
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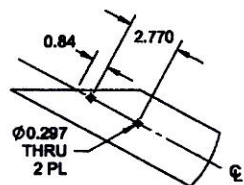
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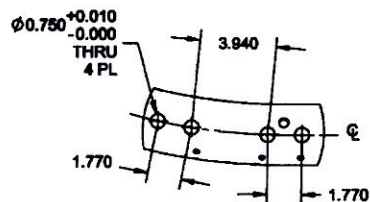
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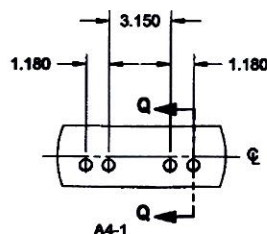
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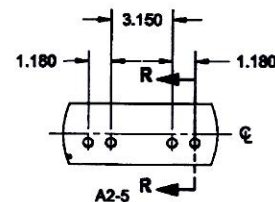
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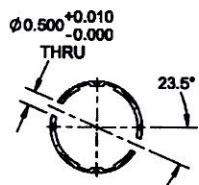
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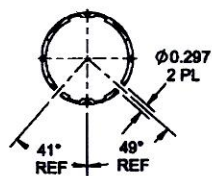
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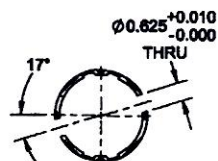
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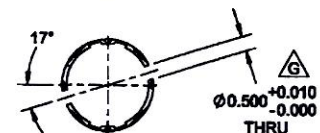
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SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL

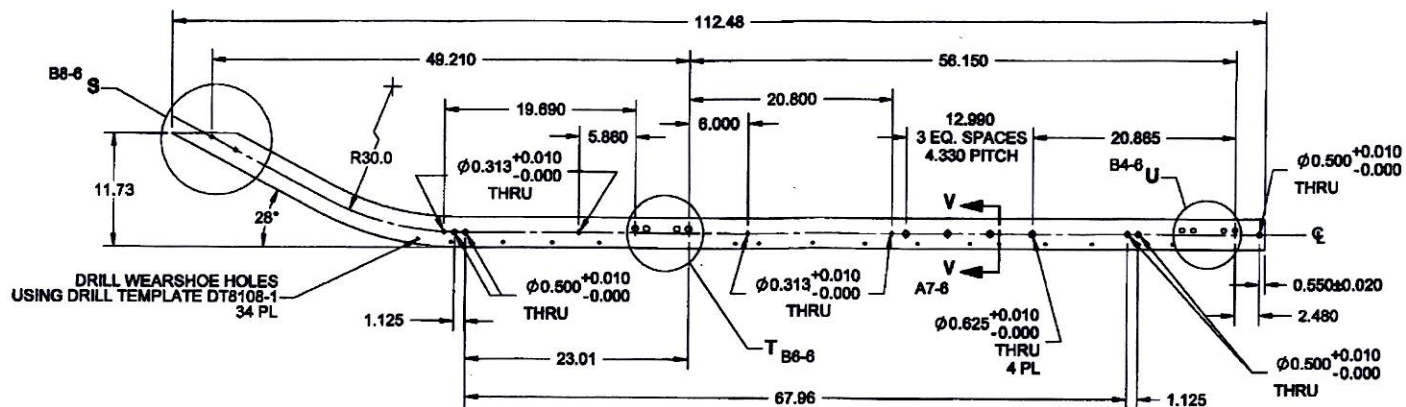


SECTION R-R
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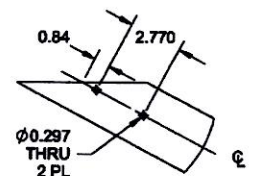
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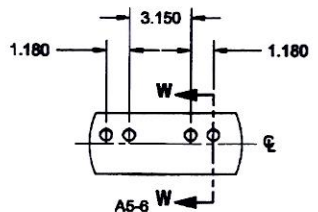
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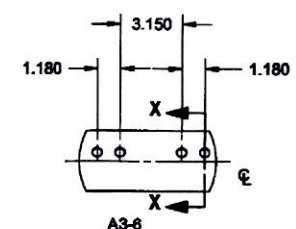
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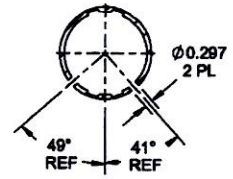
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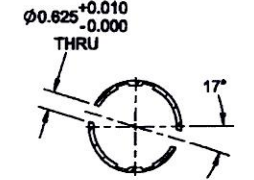
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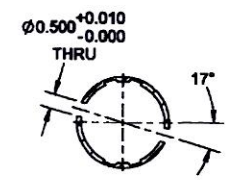
DETAIL U
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SECTION V-V
C4-6
SCALE 3X, 17 PL



SECTION W-W
B8-6
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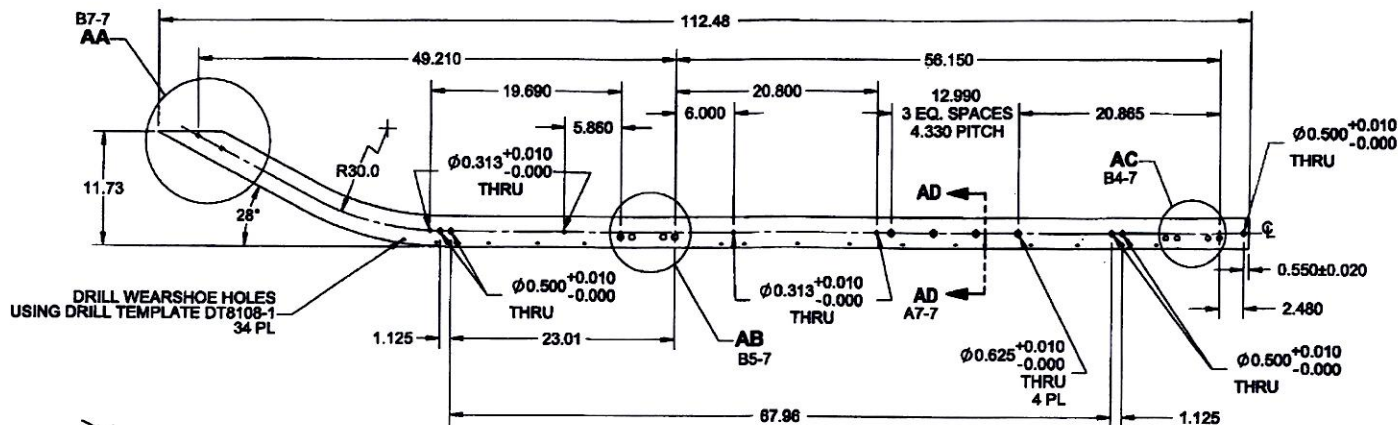


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SCALE 3X, 4 PL

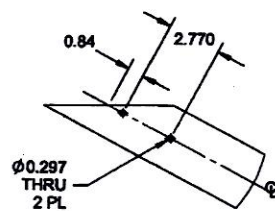
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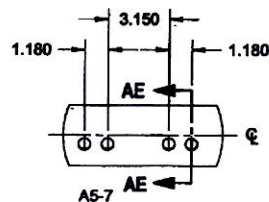
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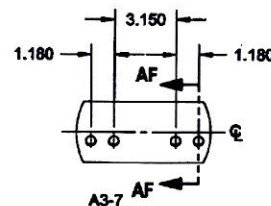
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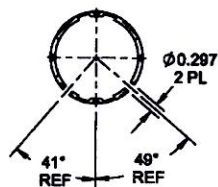
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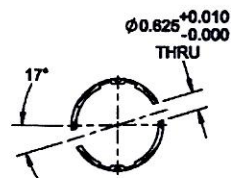
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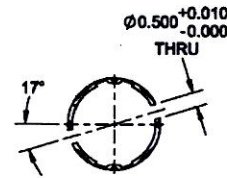
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SECTION AD-AD
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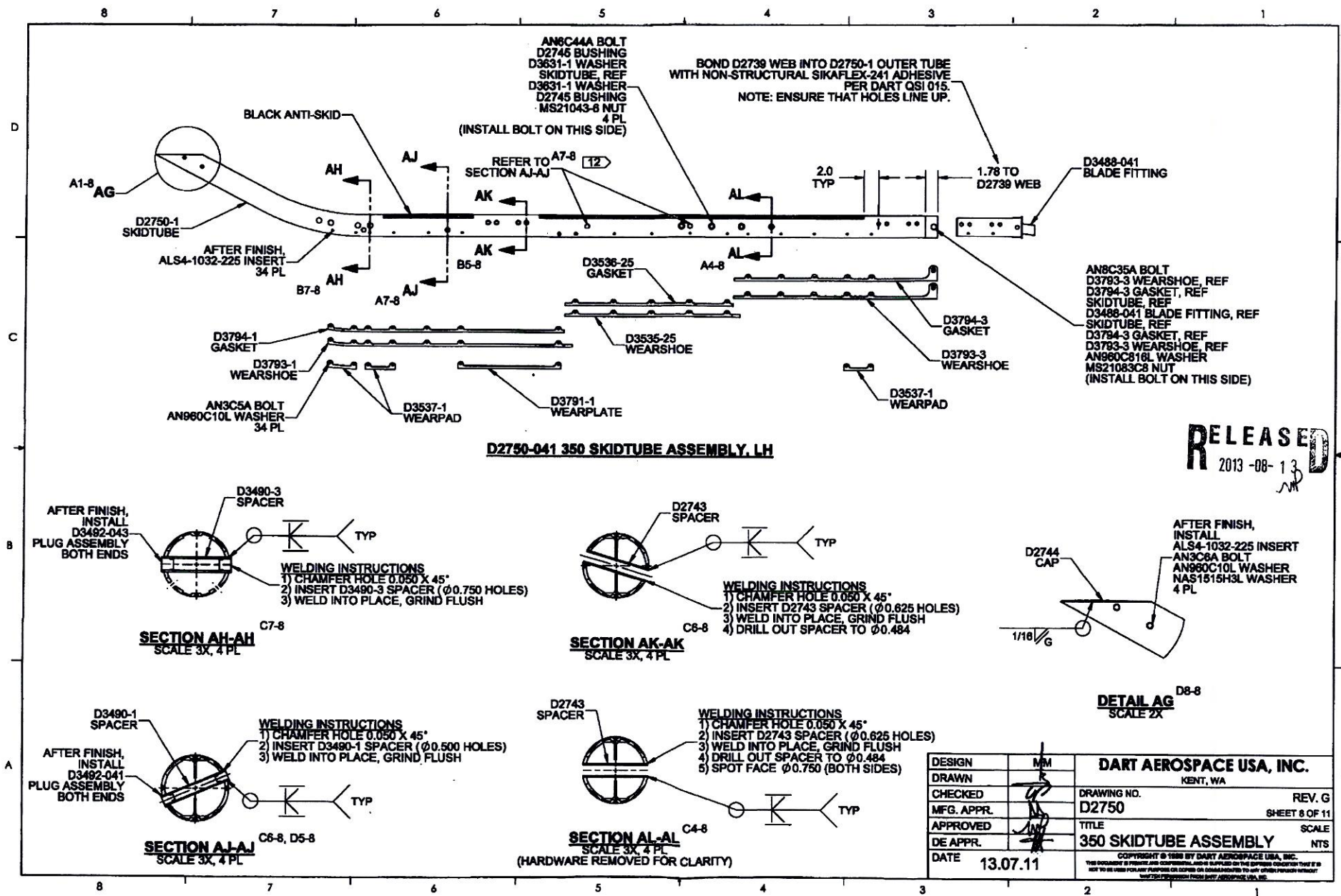
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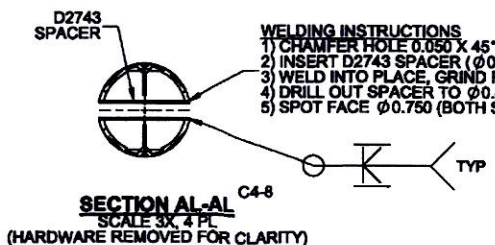
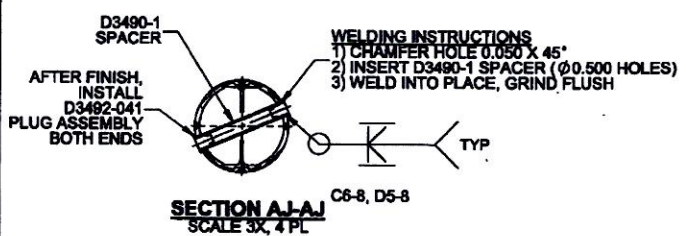
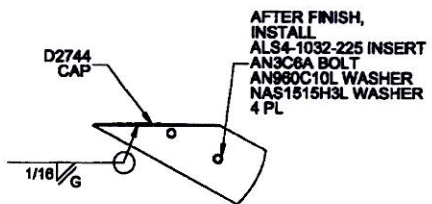
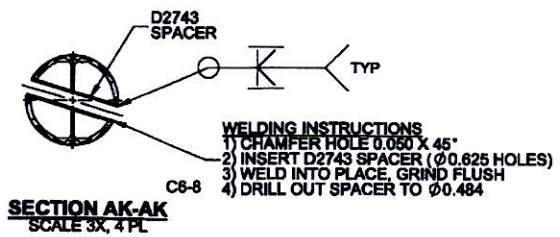
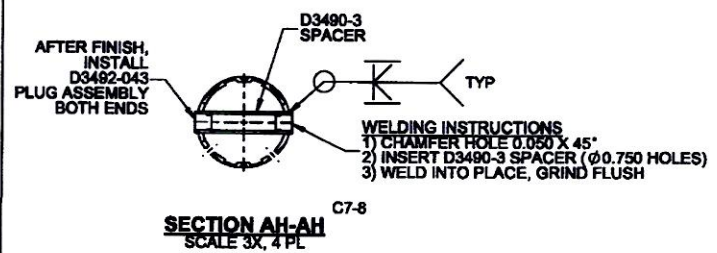
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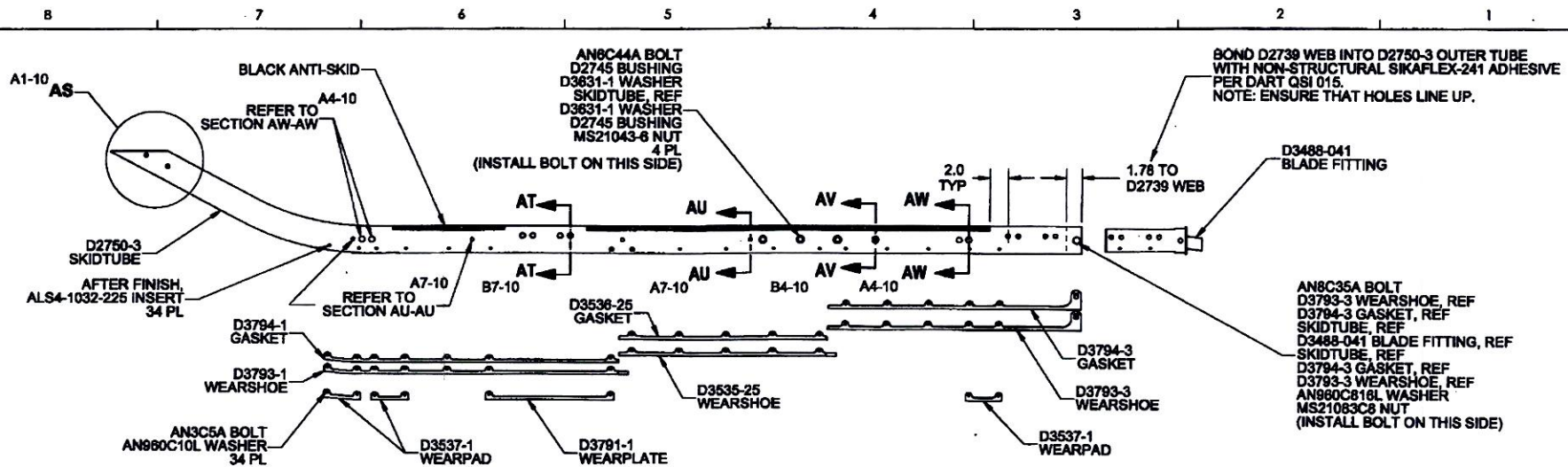


D2750-041 350 SKIDTUBE ASSEMBLY, LH

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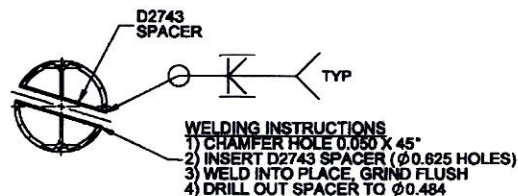


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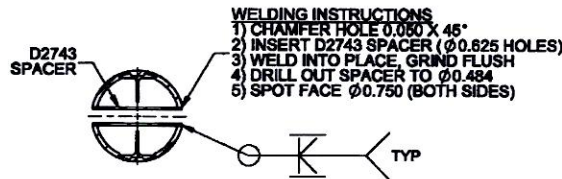


D2750-043 350 SKIDTUBE ASSEMBLY, LH

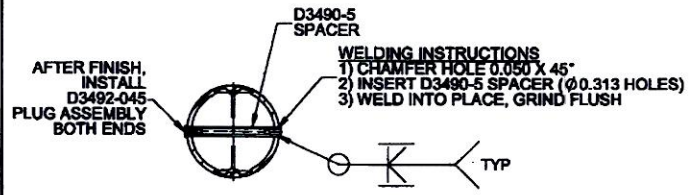
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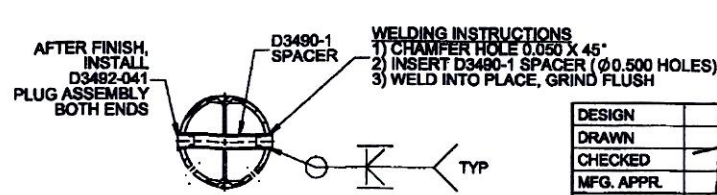
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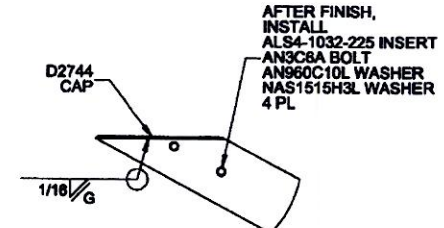
SECTION AV-AV SCALE 3X, 4 PL (HARDWARE REMOVED FOR CLARITY)



SECTION AU-AU SCALE 3X, 4 PL



SECTION AW-AW SCALE 3X, 4 PL



DETAIL AS SCALE 2X

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